

FEDERAL
WORKPLACE INDOOR
AIR QUALITY IMPROVEMENT
ACT OF 1994

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WORKPLACE INDOOR AIR QUALITY IMPROVEMENT
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A BILL

To improve indoor air quality in offices
and other non-industrial workplaces

Be it enacted by the Senate and House of Representatives
of the United States of America in Congress assembled,

SECTION 1. SHORT TITLE.

This Act may be cited as the "Workplace Indoor Air
Quality Improvement Act of 1994."

SECTION 2. FINDINGS.

Congress finds that --

(1) poor indoor air quality is associated with
significant adverse health effects in office and other non-
industrial workers and may result in increases in health care costs
and declines in worker productivity;

(2) citizens of the United States spend up to 90 percent
of a day indoors, and, consequently, there is a significant
potential for exposure to poor indoor air quality;

(3) existing Federal, State and local occupational and
public health laws, rules and programs do not assure adequate
protection of office and other non-industrial workers from poor
indoor air quality;

(4) a comprehensive program to address poor indoor air quality, which includes conducting indoor air quality research, evaluating mitigation techniques, developing and distributing indoor air quality information, issuing an indoor air quality standard and taking other appropriate measures, is necessary to improve the health of office and other non-industrial workers, reduce associated health care costs and increase productivity.

SECTION 3. DEFINITIONS.

For the purposes of this Act, the terms:

(1) "Director" means the Director of the National Institute for Occupational Safety and Health;

(2) "Secretary" means the Secretary of Labor;

(3) "ASHRAE" means the American Society of Heating, Refrigeration and Air-conditioning Engineers, Incorporated;

(4) "indoor workplaces" refers to the enclosed portions of buildings utilized as offices or as other non-industrial work areas;

(5) "Federal workplace" means any indoor workplace occupied by Federal employees in a building owned or leased in whole or in part by a Federal agency;

(6) "Federal agency" means any executive agency as defined in Title 5, Section 105, of the United States Code.

SECTION 4. WORKPLACE INDOOR AIR QUALITY RESEARCH.

(a) WORKPLACE INDOOR AIR QUALITY ASSESSMENT -- The Director, in coordination with the Secretary, shall conduct an indoor air quality assessment of indoor workplaces for the purpose of identifying and evaluating:

(1) the relative effectiveness of existing ventilation systems and the characteristics and components of such systems, and of related ventilation system management and maintenance practices, in improving indoor air quality;

(2) the effects on indoor air quality of variables such as ventilation rates, temperature and humidity, worker densities and configurations, and other significant factors;

(3) the effectiveness of existing methods for measuring and evaluating the relationship between ventilation and indoor air quality;

(4) the exposure of persons to poor indoor air quality in different building classes or types;

(5) building classes or types and design features or characteristics which increase the likelihood of exposure to poor indoor air quality; and

(6) the association of poor indoor air quality with outdoor sources, building management practices, equipment operation practices, building materials, and related factors.

This assessment shall include the collection and evaluation of existing data as well as the collection of new data from NIOSH's on-site monitoring and evaluation of a broad range of

indoor workplaces with differing design characteristics, ventilation systems and practices, construction materials, furnishings, worker populations and densities, climates, indoor air quality experience and other relevant factors.

(b) NEW MANAGEMENT TECHNOLOGIES DEMONSTRATION AND DEVELOPMENT -- The Secretary, in coordination with the Director, shall --

(1) evaluate the effectiveness of new ventilation system technologies and related operation and maintenance practices; new methods or practices for monitoring and regulating ventilation system flow rates and for monitoring poor indoor air quality; new filtration and other technologies for the reduction of indoor air quality problems; and new building material and construction practices that reduce potential sources of poor indoor air quality;

(2) develop and demonstrate feasible, effective and cost-effective systems, practices, methods, processes, technologies and materials that reduce indoor air quality problems through improved ventilation system design and operation, improved ventilation system monitoring and maintenance equipment and techniques, and other improved practices and materials;

(3) assess the capital and operational costs of applying the methods for reducing indoor air quality problems described in paragraphs (1) and (2) of this subsection in buildings of different types, sizes, ages, and designs;

(4) develop protocols, methods, techniques and instruments for sampling indoor air to determine the presence and

level of indoor air constituents, including sample collection and the storage of samples before analysis and development of methods to improve the efficiency and reduce the cost of analysis;

(5) develop air quality sampling methods and instruments which are inexpensive and easy to use in the workplace;

(6) develop control technologies, building design criteria, and management practices to prevent the entrance of ambient air contaminants into buildings (for example, air intake protection, sealing, and related measures); and

(7) develop materials and products which may be used as alternatives to materials or products which are now in use and which contribute to poor indoor air quality.

(c) COORDINATING COUNCIL ON WORKPLACE INDOOR AIR QUALITY RESEARCH --

(1) There is established a Coordinating Council on Workplace Indoor Air Quality Research, which shall provide for the full and effective coordination of Federal agency activities relating to workplace indoor air quality research conducted under this section and other existing statutory authority;

(2) The Coordinating Council on Workplace Indoor Air Quality Research shall be comprised of senior management representatives involved in workplace indoor air quality programs from the following Federal agencies:

- (A) the Department of Labor;
- (B) the Department of Health and Human Services;
- (C) the Department of Energy; and

(D) the General Services Administration.

The representatives from the Departments of Labor and Health and Human Services shall act as co-chair of the Council.

(3) The Coordinating Council on Workplace Indoor Air Quality Research shall establish schedules for the conduct of the research activities undertaken pursuant to this section and for the receipt of periodic reports on the progress of such research. A report on the preliminary results of all such research shall be submitted to the Secretary within twenty-four months of the date of enactment of this Act.

SECTION 5. WORKPLACE INDOOR AIR QUALITY INFORMATION CLEARINGHOUSE.

The Secretary, in consultation with appropriate Federal agencies, shall establish a national workplace indoor air quality clearinghouse to be used as a source of authoritative and reliable information concerning indoor air quality in the indoor workplace. The clearinghouse shall be responsible for gathering such information from all available sources, preparing such information for publication, and distributing the information to other Federal agencies, State and local governments, building owners and managers, employers, employee representatives, and other private organizations and individuals. It shall also be a source of information concerning services and other resources that provide assistance on workplace indoor air quality issues.

SECTION 6. ASSESSMENT OF SCHOOLS AND CHILD CARE FACILITIES.

(a) AUTHORITY -- The Secretary of Health and Human Services shall conduct a national assessment to survey the extent and seriousness of indoor air contamination in primary and secondary school buildings and in child care facilities.

(b) REPORT TO CONGRESS -- A report shall be provided to Congress of the results of the national assessment not later than two years after the date of enactment of this Act. The report required by this paragraph shall provide recommendations for activities or programs to reduce and avoid indoor air contamination in primary and secondary school buildings and in child care facilities.

SECTION 7. WORKPLACE INDOOR AIR QUALITY STANDARD.

(a) AUTHORITY -- The Secretary, pursuant to the provisions of this section and the Occupational Safety and Health Act of 1970 (29 U.S.C. §§ 651-679) shall issue a generic workplace indoor air quality standard to protect workers from poor indoor air quality by requiring adequate ventilation of indoor workplaces; proper operation and maintenance of ventilation systems; improved construction practices and materials; and improved worker education.

(b) PROPOSED STANDARD -- Within eighteen months after the date of enactment of this Act, the Secretary shall publish in the Federal Register a proposed standard, which shall consist of the following worker protection provisions:

(1) The ventilation rate delivered to each worker occupying any indoor workplace in a building equipped with a mechanical ventilation system shall meet or exceed the rate of 20 cubic feet per minute of outdoor air specified for general office space by ASHRAE Standard 62-1989 (Ventilation for Acceptable Indoor Air Quality). Air filters or dust collectors shall have an efficiency rating of at least 60 percent using the test methods prescribe by ASHRAE Standard 52-1976 and shall be fitted so as to prevent air by-pass. The ventilation rate requirements of this paragraph shall be applicable to new buildings, portions of buildings that undergo significant renovation and portions of buildings in which the mechanical ventilation system is designed to meet such ventilation rate requirements or is capable of meeting such requirements through practicable adjustments.

(2) In buildings or portions of buildings equipped with mechanical ventilation systems in which the ventilation rate requirements of paragraph (1) cannot be met through practicable adjustments to the systems, such systems shall be operated during normal working hours at the design capacity for the intake of outdoor air and periodic representative samples of carbon dioxide shall be taken. If the indoor carbon dioxide level exceeds 1,000 parts per million, appropriate steps shall be taken to improve the indoor air quality, such as the utilization of supplemental local ventilation, the relocation and dispersal of employees or the redesign of work spaces.

(3) The ventilation for indoor workplaces in buildings or portions of buildings that are not equipped with mechanical

ventilation systems shall conform to the guidelines set forth in the indoor air quality procedure of ASHRAE Standard 62-1989.

(4) Buildings shall be inspected at least annually to ensure compliance with the requirements of paragraphs (1)-(3) of this section. In buildings served in whole or in part by a mechanical ventilation system, such inspections shall be conducted in a manner that identifies any necessary cleaning, repair or other maintenance required to be performed in order to ensure optimal operation of the system and that the system is free of visible mold, algae or other microbiological agents.

(5) Before any indoor workplace in a newly constructed or renovated building or portion of a building is occupied by any employee, the building shall be commissioned in accordance with ASHRAE GPC-1, "Guideline for Commissioning of HVAC Systems."

(6) In any building in which construction or renovation is occurring, the responsible construction contractors shall take reasonable steps to require the use of construction methods and other appropriate procedures to minimize the degradation of indoor air quality in indoor workplaces occupied by employees during the construction or renovation work.

(7) Procedures shall be established for investigating employee complaints related to indoor air quality in indoor workplaces. Such procedures shall include an initial evaluation within a reasonable time of all good faith complaints and, where further steps are appropriate to address the complaint, an investigation of compliance with this section and appropriate

corrective action. The identity of any employee who requests that an indoor air quality investigation be conducted pursuant to this paragraph shall not be disclosed by the person receiving the complaint unless the complaining employee expressly and in writing waives the protection afforded by this provision.

(8) Information and training shall be provided to assure that employees are made aware of the provisions of the standard and their rights thereunder, the importance of adequate ventilation and any changes made in the indoor workplace that may affect indoor air quality.

(c) FINAL STANDARD -- Within twelve months following the issuance of the proposed standard, the Secretary shall promulgate a final standard to improve indoor air quality through generic requirements based upon the worker protection provisions listed in subsection (b) of this section and on the rulemaking record considered as a whole. The Secretary may require additional measures to address a specific indoor air constituent only if he determines on the basis of reliable scientific evidence that there is a significant residual risk of material harm to workers from such constituent after taking into account the reduction in risk from such constituent achieved by the generic requirements of the standard.

SECTION 8. INDOOR AIR QUALITY IN FEDERAL WORKPLACES.

(a) AUTHORITY -- The Administrator of the General Services Administration in coordination with the Secretary, shall develop and implement a program to respond to and reduce indoor air quality problems in Federal workplaces.

(b) REGULATIONS -- Within twenty-four months of the date of enactment of the Act, the Administrator of the General Services Administration shall adopt interim regulations requiring the reduction of indoor air quality problems in Federal workplaces. Such regulations shall incorporate, to the fullest extent practicable, the provisions of the proposed standard issued under Section 6(b) of this Act. Permanent regulations shall be issued at the time of the issuance of the final standard under section 6(c) of this Act and shall take into account any revisions in such standard.

(c) RESPONSE PLANS -- Within thirty months of the date of enactment of this Act, the head of each Federal agency shall develop a response plan, pursuant to the interim regulations issued under subsection (b) of this section, for the Federal workplace under the control of that agency. Each response plan shall include:

(1) a list of all Federal buildings included in the plan;

(2) a description and schedule of general response actions including general building management practices, product purchase guidelines, air quality problem identification practices

and methods, personnel training programs, and other actions to be implemented to reduce exposures to poor indoor air quality;

(3) a description and schedule of specific response actions to be implemented in each specific building identified in the plan.

The response plans shall be modified, if necessary, in accordance with the permanent regulations issued under subsection (b) of this section, and shall be implemented within thirty-six months of the date of enactment of this Act.

(d) INDOOR AIR QUALITY RESERVE -- (1) The Administrator of the General Services Administration shall reserve 0.5 per centum of any funds used for construction of new Federal buildings for design and construction of measures to reduce poor indoor air quality within such buildings.

(2) Measures which may be funded with the reserve provided for in this subsection may include, but are not limited to --

(A) development and implementation of general design principles intended to avoid or prevent indoor air quality problems;

(B) design and construction of improved ventilation techniques or equipment;

(C) development and implementation of product purchasing guidelines;

(D) design and construction of indoor air constituent detection and response systems;

(E) development of building management guidelines and practices; and

(F) training in building and systems operations for building management and maintenance personnel.

(3) Upon completion of construction of each Federal building covered by this section, the Administrator of the General Services Administration shall file with the Secretary and with the Clearinghouse established under section 5 of this Act a report describing the uses made of the reserve provided for in this subsection. Such report shall be in sufficient detail to provide design and construction professionals with models and general plans of various indoor air quality improvement measures adequate to assess the appropriateness of such measures for application in other buildings.